

## UTAH DIVISION OF AIR QUALITY

### Fugitive Dust Control Plans

8/4/04

The Fugitive Emissions and Fugitive Dust Rule (R307-309) requires a fugitive dust control plan from all sources whose activities or equipment have the potential to produce fugitive dust, airborne dust, along the Wasatch Front; Davis, Salt Lake and Utah counties and Ogden City. Fugitive dust control plans minimize fugitive dust on-site from pits, yards, storage areas, and areas of operation and to prevent opacities from exceeding 20% on site and 10% at the property boundary. The fugitive dust rule addresses storage and handling of aggregate materials, construction/demolition activities on sites greater than 1/4 acre, road ways, mining activities, and tailings piles and ponds. Sources shall develop their dust control plans and submit them to the Executive Secretary no later than 30 days after the source becomes subject to the rule. Fugitive dust control plans, tailored to specific operations and sites of operation, shall be required for:

1. All operations with material storage, handling and/or hauling operations and areas of source operations, construction sites; and all sources or operations which have the potential to produce fugitive dust in nonattainment areas along the Wasatch Front;
2. All temporary relocation under R307-401-7. Sources will be required to develop site specific dust control plans for each temporary relocation of permitted equipment;
3. All sources and areas of source operations, pits and yards, statewide, which have been issued a Notice of Violation for excess fugitive dust.

Operations, areas of operation and sources that shall be addressed in fugitive dust control plans are:

- |                                     |  |
|-------------------------------------|--|
| - material storage/handling         | - drilling, blasting, and pushing operations |
| - material handling/transfer        | - clearing/leveling/development construction |
| - material processing/transfer      | - earth moving and excavation                |
| - road ways and yard areas          | - track out/spillage on paved roads          |
| - loading/hauling/dumping materials | - exposed surfaces                           |

Fugitive dust control strategies include, but are not limited to:

- |  |  |                       |
|--|--|-----------------------|
| - reducing vehicular traffic                       | - paving/cleaning road ways                  | - hydro drilling      |
| - chemical stabilization                           | - limiting number of blasts                  | - covering loads      |
| - enclosing/covering operations                    | - conveyor systems                           | - wind breaks         |
| - planting vegetative cover                        | - boots on drop points                       | - mulching            |
| - providing synthetic cover                        | - reduction in height of drop points         | - dust collectors     |
| - limiting blasts to wet seasons                   | - limiting number of blasts                  | - wetting/watering    |
| - reducing vehicular speed                         | - wetting materials before processing        | - reducing production |
| - cleaning haul trucks before leaving loading area | - limiting pushing operations to wet seasons |                       |

If you have any questions concerning these requirements, please contact the Compliance Section in the Division of Air Quality at 536-4000.

## **UTAH DIVISION OF AIR QUALITY**

### **Criteria for developing a Fugitive Dust Control Plan for compliance with R307-309-4**

#### **Source Information:**

1. Name of your operation (source); provide a name if the source is a construction site;
2. Address or location of your operation or construction site;
3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation;
4. Lengths of the project, if temporary (days at location);
5. Description of process (include all sources of dust and fugitive dust);
6. Type of material processed or disturbed;
7. Amount of material processed (tons per year, tons per month, lbs/hr, applicable units);
8. Destination of product (where will the material produced be used or transported, be specific, provide address or specific location), information needed for temporary relocation applicants;
9. Identify the individual who is responsible for the implementation and maintenance of fugitive dust control measures. List name(s), position(s) and telephone number(s);
10. List, and attach copies of, any contract, lease, liability agreement with other companies that may, or will, be responsible for dust control on site or on the project.

#### **Description of Fugitive Dust Emission Activities: (Things to consider in addressing fugitive dust control strategies.)**

1. Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, clearing and leveling, etc);
2. List type of equipment generating the fugitive dust;
3. Diagram location of each activity or piece of equipment on site;

4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads "on" and "off" property;
5. Vehicle miles traveled on unpaved roads associated with the activity (average speed);
6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc).
7. Estimated the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

### **Description of Fugitive Dust Emission Controls on Site:**

Control strategies shall be designed to meet 20% opacity or less on site (a lesser opacity may defined by Approval Order conditions or federal requirements such as NSPS), and control strategies must prevent exceeding 10% opacity from fugitive dust at the property boundary (site boundary) for compliance with R307-309-3.

1. Types of ongoing emission controls proposed for each activity, each piece of equipment, and haul roads;
2. Types of additional dust controls proposed for bare, exposed surfaces (chemical stabilization, synthetic cover, wind breaks, vegetative cover, etc);
3. Method of application of dust suppressant;
4. Frequency of application of dust suppressant;
5. Explain what triggers the use of a special control measure other than routine measures already in place, such as covered loads or measures covered by a permit condition (increase in opacity, high winds, citizen complaints, dry conditions, etc);
6. Explain in detail what control strategies/measures will be implemented off hours, i.e. Saturdays/Sundays/Holidays, as well as 6 PM to 6 AM each day.

### **Description of Fugitive Dust Control Off Site:**

Prevent, to the maximum extent possible, deposition of materials which may create fugitive dust on public and private paved roads in compliance with R307-309-5, 6, 7.

1. Types of emission controls initiated by your operation that are in place "off" property (application of water, covered loads, sweeping roads, vehicle cleaning, etc.);
2. Proposed remedial controls that will be initiated promptly if materials which may create fugitive dust are deposited on public and private paved roads.

## **Fugitive Dust Control Plan Violation Report:**

When a source is found in violation of R307-309-3 or in violation of the Fugitive Dust Control Plan, the source shall submit a report to the Executive Secretary within 15 days after receiving a notice of violation. The report shall include the following information:

- 1 Name and address of dust source;
2. Time and duration of dust episode;
3. Meteorological conditions during the dust episode;
4. Total number and type of fugitive dust activities and dust producing equipment within each operation boundary. If no change has occurred from the existing dust control plan, the source should state that activities/equipment are the same;
5. Fugitive dust activities or dust producing equipment that caused a violation of R-307-309-3 or the source's dust control plan;
6. Reasons for failing to control dust from the dust generating activity or equipment;
7. New and/or additional fugitive dust control strategies necessary to achieve compliance with R307-309-3, 4, 5, 6, or 7;
8. If it cannot be demonstrated that the current, approved fugitive dust control plan will result in compliance with R307-309-3 through 7, the plan must be revised so as to demonstrate compliance with 307-309-3 through 7. Within 30 days of receiving a fugitive dust notice of violation, the source shall submit the revised plan to Executive Secretary for review and approval.

## **SUBMIT THE FUGITIVE DUST CONTROL PLAN TO:**

Executive Secretary  
Utah Division of Air Quality  
POB 144820  
150 North 1950 West  
Salt Lake City, Utah 84114-4820

Phone: 801-536-4000  
Fax: 801-536-4099

**R307. Environmental Quality, Air Quality.****R307-205. Emission Standards: Fugitive Emissions and Fugitive Dust.****R307-205-1. Applicability.**

(1) Except where otherwise specified, R307-205 applies statewide.

(2) The provisions of R307-205 shall not apply to any sources for which limitations for fugitive dust or fugitive emissions are assigned pursuant to R307-401, R307-305, or R307-307 nor shall they apply to agricultural or horticultural activities.

(3) The following definitions apply throughout R307-205:

"Material" means sand, gravel, soil, minerals or other matter which may create fugitive dust.

"Road" means any public or private road.

**R307-205-2. Fugitive Emissions.**

Fugitive emissions from sources in areas outside Davis, Salt Lake and Utah Counties, Ogden City and any nonattainment area for PM10 and which were constructed before April 25, 1971, shall not exceed 40% opacity. Fugitive emissions from sources constructed after April 25, 1971, shall not exceed 20% opacity.

**R307-205-3. Fugitive Dust.**

(1) Storage and Handling of Aggregate Materials. Any person owning, operating or maintaining a new or existing material storage, handling or hauling operation shall minimize fugitive dust from such an operation. Such control may include the use of enclosures, covers, stabilization or other equivalent methods or techniques as approved by the executive secretary.

(2) Construction and Demolition Activities.

(a) Any person engaging in clearing or leveling of land greater than one-quarter acre in size, earthmoving, excavation, or movement of trucks or construction equipment over cleared land greater than one-quarter acre in size or access haul roads shall take steps to minimize fugitive dust from such activities. Such control may include watering and chemical stabilization of potential fugitive dust sources or other equivalent methods or techniques approved by the executive secretary.

(b) The owner or operator of any land area greater than one-quarter acre in size that has been cleared or excavated shall take measures to prevent fugitive particulate matter from becoming airborne. Such

(a) periodic watering of unpaved roads,

measures may include:

- (i) planting vegetative cover,
- (ii) providing synthetic cover,
- (iii) watering,
- (iv) chemical stabilization,
- (v) wind breaks, or
- (vi) other equivalent methods or techniques

approved by the executive secretary.

(c) Any person engaging in demolition activities including razing homes, buildings, or other structures or removing paving material from roads or parking areas shall take steps to minimize fugitive dust from such activities. Such control may include watering and chemical stabilization or other equivalent methods or techniques approved by the executive secretary.

**R307-205-4. Roads.**

(1) Any person planning to construct or operate a new unpaved road which is anticipated to have an average daily traffic volume of 150 vehicle trips per day or greater, averaged over a consecutive five day period, shall submit a notice of intent to construct or operate such a road to the executive secretary pursuant to R307-401. Such notice shall include proposed action to minimize fugitive dust emissions from the road.

(2) The executive secretary may require persons owning, operating or maintaining any new or existing road, or having right-of-way easement or possessory right to use the same to supply traffic count information as determined necessary to ascertain whether or not control techniques are adequate or additional controls are necessary.

(3) Any person who deposits materials which may create fugitive dust on a public or private paved road shall clean the road promptly.

**R307-205-5. Mining Activities.**

(1) Fugitive dust, construction activities, and roadways associated with mining activities are regulated under the provisions of R307-205-5 and not by R307-205-3 and 4.

(2) Any person who owns or operates a mining operation shall minimize fugitive dust as an integral part of site preparation, mining activities, and reclamation operations.

(3) The fugitive dust control measures to be used may include:

- (b) chemical stabilization of unpaved roads,

- (c) paving of roads,
  - (d) prompt removal of coal, rock minerals, soil, and other dust-forming debris from roads and frequent scraping and compaction of unpaved roads to stabilize the road surface,
  - (e) restricting the speed of vehicles in and around the mining operation,
  - (f) revegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are a source of fugitive dust,
  - (g) restricting the travel of vehicles on other than established roads,
  - (h) enclosing, covering, watering, or otherwise treating loaded haul trucks and railroad cars, to minimize loss of material to wind and spillage,
  - (i) substitution of conveyor systems for haul trucks and covering of conveyor systems when conveyed loads are subject to wind erosion,
  - (j) minimizing the area of disturbed land,
  - (k) prompt revegetation of regraded lands,
  - (l) planting of special windbreak vegetation at critical points in the permit area,
  - (m) control of dust from drilling, using water sprays, hoods, dust collectors or other controls approved by the executive secretary.
  - (n) restricting the areas to be blasted at any one time,
  - (o) reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization,
  - (p) restricting fugitive dust at spoil and coal transfer and loading points,
  - (q) control of dust from storage piles through use of enclosures, covers, or stabilization and other equivalent methods or techniques as approved by the executive secretary, ~~and~~ or
  - (r) other techniques as determined necessary by the executive secretary.
- (4) Any person owning or operating an existing mining operation in an actual area of nonattainment for particulate or an existing mining operation outside an actual area of nonattainment from which fugitive dust impacts an actual area of nonattainment for particulate shall submit plans for control of fugitive dust from such operations to the executive secretary for approval no later than September 29, 1981, 180 days after the effective date of this regulation.

#### **R307-205-6. Tailings Piles and Ponds.**

- (1) Fugitive dust, construction activities, and roadways associated with tailings piles and ponds are regulated under the provisions of R307-205-6 and not

by R307-205-3 and 4.

(2) Any person owning or operating an existing tailings operation where fugitive dust results from grading, excavating, depositing, or natural erosion or other causes in association with such operation shall take steps to minimize fugitive dust from such activities. Such controls may include:

- (a) watering,
- (b) chemical stabilization,
- (c) synthetic covers,
- (d) vegetative covers,
- (e) wind breaks,
- (f) minimizing the area of disturbed tailings,
- (g) restricting the speed of vehicles in and around the tailings operation, or
- (h) other equivalent methods or techniques which may be approvable by the executive secretary.

(3) Any person owning or operating an existing tailings operation in a nonattainment area for particulate or an existing mining operation outside an actual area of nonattainment from which fugitive dust impacts an actual area of nonattainment for particulate shall submit plans for control of fugitive dust from such operations to the executive secretary for approval no later than September 29, 1981, 180 days after the effective date of this regulation.

**KEY: air pollution, fugitive emissions\*, mining\*, tailings\***

1999	19-2-101
	19-2-104
	19-2-109

**R307. Environmental Quality, Air Quality.**

**R307-309. Davis, Salt Lake and Utah Counties, Ogden City and Any Nonattainment Area for PM10: Fugitive Emissions and Fugitive Dust.**

**R307-309-1. Applicability and Definitions.**

(1) Applicability. R307-309 applies to all sources of fugitive dust and fugitive emissions located in Davis, Salt Lake and Utah Counties, Ogden City, and any nonattainment area for PM10, except as specified in (2) below. Any source located in those areas for which limitations for fugitive dust or fugitive emissions are assigned pursuant to R307-401 is subject to R307-309 on May 4, 1999, unless the source has an operating permit issued under R307-415 prior to that date. If the source has an operating permit, the source is subject to R307-309 on the date of permit renewal or permit reopening as specified in R307-415, whichever occurs first.

(2) Exemptions.

(a) The provisions of R307-309 do not apply to agricultural or horticultural activities.

(b) Any source which is subject to R307-305-2 through 7 or R307-307 is exempt from all provisions of R307-309 except for R307-309-4.

(c) Any source regulated by R307-205-5 or R307-205-6 is exempt from all provisions of R307-309 except for R307-309-4.

(3) The following additional definitions apply to R307-309:

"Material" means sand, gravel, soil, minerals or other matter which may create fugitive dust.

"Road" means any public or private road.

**R307-309-2. Fugitive Emissions.**

Fugitive emissions from any source shall not exceed 15% opacity.

**R307-309-3. General Requirements for Fugitive Dust.**

(1) Opacity caused by fugitive dust shall not exceed: (a) 10% at the property boundary; and (b) 20% on site unless an approval order issued under R307-401 or a dust control plan specifies a lower level; except when the wind speed exceeds 25 miles per hour and the owner or operator is taking appropriate actions to control fugitive dust. If the source has a dust control plan approved by the executive secretary, control measures in the plan are considered appropriate. Wind speed may be measured by a hand-held anemometer or equivalent device.

(2) Any source with a dust control plan approved by

the executive secretary prior to March 4, 1999, shall review and revise the plan in accordance with R307-309-4 below. The revised plan shall be submitted to the executive secretary no later than May 4, 1999.

**R307-309-4. Fugitive Dust Control Plan.**

(1) Any person owning or operating a new or existing source of fugitive dust, including storage, hauling or handling operations or engaging in clearing or leveling of land one-quarter acre or greater in size, earthmoving, excavation, or movement of trucks or construction equipment over cleared land one-quarter acre or greater in size or access haul roads shall submit a plan to control fugitive dust to the executive secretary no later than 30 days after the source becomes subject to the rule. The plan shall address fugitive dust control strategies for the following operations as applicable:

- (a) Material Storage;
  - (b) Material handling and transfer;
  - (c) Material processing;
  - (d) Road ways and yard areas;
  - (e) Material loading and dumping;
  - (f) Hauling of materials;
  - (g) Drilling, blasting and pushing operations;
  - (h) Clearing and leveling;
  - (i) Earth moving and excavation;
  - (j) Exposed surfaces;
  - (k) Any other source of fugitive dust.
- (2) Strategies to control fugitive dust may include:
- (a) Wetting or watering;
  - (b) Chemical stabilization;
  - (c) Enclosing or covering operations;
  - (d) Planting vegetative cover;
  - (e) Providing synthetic cover;
  - (f) Wind breaks;
  - (g) Reducing vehicular traffic;
  - (h) Reducing vehicular speed;
  - (i) Cleaning haul trucks before leaving loading area;
  - (j) Limiting pushing operations to wet seasons;
  - (k) Paving or cleaning road ways;
  - (l) Covering loads;
  - (m) Conveyor systems;
  - (n) Boots on drop points;
  - (o) Reducing the height of drop areas;
  - (p) Using dust collectors;
  - (q) Reducing production;
  - (r) Mulching;
  - (s) Limiting the number and power of blasts;
  - (t) Limiting blasts to non-windy days and wet seasons;

- (u) Hydro drilling;
  - (w) Using a cattle guard before entering a paved road;
  - (x) Washing haul trucks before leaving the loading site; or
  - (y) Terracing.
- (3) Each source shall comply with all provisions of the fugitive dust control plan as approved by the executive secretary.

**R307-309-5. Storage, Hauling and Handling of Aggregate Materials.**

Any person owning, operating or maintaining a new or existing material storage, handling or hauling operation shall prevent, to the maximum extent possible, material from being deposited onto any paved road other than a designated deposit site. Any such person who deposits materials which may create fugitive dust on a public or private paved road shall clean the road promptly.

**R307-309-6. Construction and Demolition Activities.**

Any person engaging in clearing or leveling of land with an area of one-quarter acre or more, earthmoving, excavating, construction, demolition, or moving trucks or construction equipment over cleared land or access haul roads shall prevent, to the maximum extent possible, material from being deposited onto any paved road other than a designated deposit site. Any such person who deposits materials which may create fugitive dust on a public or private paved road shall clean the road promptly.

**R307-309-7. Roads.**

(1) Any person responsible for construction or maintenance of any existing road or having right-of-way easement or possessing the right to use the same whose activities result in fugitive dust from the road shall minimize fugitive dust to the maximum extent possible. Any such person who deposits materials which may create fugitive dust on a public or private paved road shall clean the road promptly.

**(2) Unpaved Roads.**

(a) When unpaved roads have an average daily traffic volume of less than 150 vehicle trips per day, averaged over a consecutive 5-day period, fugitive dust shall be minimized to the maximum extent possible.

(b) When unpaved roads have an average daily traffic volume of 150 vehicle trips per day or greater, averaged over a consecutive 5 day period, control techniques shall be used which are equal to or better than 2-inch bituminous surface.

- (v) Wetting materials before processing;
- (c) Any person responsible for construction or maintenance of any new or existing unpaved road shall prevent, to the maximum extent possible, the deposit of material from the unpaved road onto any intersecting paved road during construction or maintenance. Any person who deposits materials which may create fugitive dust on a public or private paved road shall clean the road promptly.

**KEY: air pollution, dust\***  
1999

19-2-101  
19-2-104  
19-2-109



*SAMPLE*

**GUIDANCE THAT MUST BE CONSIDERED IN DEVELOPING AND SUBMITTING A  
DUST CONTROL PLAN FOR COMPLIANCE WITH R307-309-3, 4, 5, 6, 7**

**Source Information:**

- 1 Name of your operation (source): provide a name if the source is a construction site.
2. Address or location of your operation or construction site.  
  
Salt Lake City, Utah  
84120
3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation.  
  
N/A
4. Lengths of the project, if temporary (time period).
5. Description of process (include all sources of dust and fugitive dust). Please, if necessary, use additional sheets of paper for this description. Be sure to mark it as an attachment.  
  
Grading of Subgrade, place roadbase and lay asphalt
6. Type of material processed or disturbed.  
  
Roadbase and borrow.
7. Amount of material processed (tons per year, tons per month, lbs./hr., and applicable units).  
  
1000 Tons.

8. Destination of product (where will the material produced be used or transported, be specific, provide address or specific location), information needed for temporary relocation applicants.

[REDACTED]  
[REDACTED]  
Salt Lake City, Utah

9. Identify the individual who is responsible for the implementation and maintenance of fugitive dust control measures. List name(s), position(s) and telephone number(s).

[REDACTED] Project Superintendant  
[REDACTED]  
[REDACTED]

10. List, and attach copies of any contract lease, liability agreement with other companies that may, or will, be responsible for dust control on site or on the project.

None

**Description of Fugitive Dust Emission Activities**  
(Things to consider in addressing fugitive dust control strategies.)

Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, cleaning and leveling, etc).

Excavation and grading of roadbase and borrow.

2. List type of equipment generating the fugitive dust.

Road grader and dump trucks.

3. Diagram the location of each activity or piece of equipment on site. Please attach the diagram.

See attached plan

4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads "on" and "off" property.

See attached plan.

5. Vehicle miles travels on unpaved roads associated with the activity (average speed).

Approximately 1 mile at 10 miles per hour.

6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc.)

Anticipated dust emitted will be clay and dust.

7. Estimate the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

Approximately 1/4 sq. mile

## Description of Fugitive Dust Emission Controls on Site

Control strategies must be designed to meet 20% opacity or less on site (a lesser opacity may be defined by Approval Order conditions or federal requirements such as NSPS), and control strategies must prevent exceeding 10% opacity from fugitive dust at the property boundary (site boundary) for compliance with R307-309-3.

Types of ongoing emission controls proposed for each activity, each piece of equipment, and haul roads.

Dust control will be handled with the use of water trucks.

2. Types of additional dust controls proposed for bare, exposed surfaces (chemical stabilization, synthetic cover, wind breaks, vegetative cover, etc).

None

3. Method of application of dust suppressant.

Application will be by use of water truck as necessary.

4. Frequency of application of dust suppressant.

Application of water will be approximately every two hours or as necessary.

5. Explain what triggers the use of a special control measure other than routine measures already in place, such as covered loads or measures covered by a permit condition (increase in opacity, high winds, citizen complaints, dry conditions, etc).

Vehicle traffic and winds may also trigger dust.

6. Explain in detail what control strategies/measures will be implemented off-hours, i.e., Saturdays/Sundays/Holidays, as well as 6 PM to 6 AM each day.

Dust control will be handles through the use of water truck as necessary.

## **Description of Fugitive Dust Control Off-site**

Prevent, to the maximum extent possible, deposition of materials, which may create fugitive dust on public and private paved roads in compliance with R307-309-5, 6, 7.

1. **Types of emission controls initiated by your operation that are in place “off” property (application of water, covered loads, sweeping roads, vehicle cleaning, etc.).**
  
2. **Proposed remedial controls that will be initiated promptly if materials, which may create fugitive dust, are deposited on public and private paved roads.**

**Submit the Dust Control Plan to:**

**Executive Secretary  
Utah Air Quality Board  
POB 144820  
15 North 1950 West  
Salt Lake City, Utah 84114-4820**

**Phone: (801) 536-4000  
FAX: (801) 536-4099**